

embodiments, a mechanism may be used that pulls the push plate 410 back into the autoinsertor 420 and therefore, in these embodiments, the autoinsertor 420 serves as a container for the introduction needle 416. In various embodiments, the adhesive strip 418 may be any size and shape, including, but not limited to, the size and shape shown in FIGS. 6A-6G.

[0054] The disposable housing assembly 402 infusion device mating assembly 404 may be mated with the bottom portion 412 of the infusion device 406 by placing the infusion device mating assembly 404 on top of the bottom portion 412 and then applying force in the direction towards the bottom portion 412. As can be seen for example in FIG. 6E, in various embodiments, the infusion device mating assembly 404 is shaped such that it may be placed over the bottom portion 412 in any orientation. This may be beneficial/desirable for many reasons, including, but not limited to, the ability of a user/caregiver to vary the orientation of the disposable housing assembly 402 with respect to the bottom portion 412 of the infusion device. In various embodiments, the infusion device mating assembly 404 may be attached to the bottom portion 412 in any orientation, thus, the user may place the disposable housing assembly 402 in any orientation within 360 degrees relative to the bottom portion 412.

[0055] In various embodiments, the infusion device mating assembly 404 may include a feature configured to interact with a feature on the bottom portion 412 that secures the infusion device mating assembly 404 to the bottom portion 412. In various embodiments, these features may include locking features including but not limited to, tongue and groove features. In various embodiments, attaching the bottom portion 412 to the infusion device mating assembly 404 forms a fluid connection between a reservoir 518 in a disposable housing assembly 402 and the cannula 414.

[0056] In various embodiments of this embodiment of the infusion device system, if and when a user wishes to move the location of the disposable housing assembly 402, the infusion device mating assembly 404 may be removed from the bottom portion 412 and the bottom portion 412 and cannula 414 may be removed from the user. Following, the user may connect another infusion device 406 bottom portion 412 to their skin in a different location on their body and reconnect the disposable housing assembly 402. In some embodiments, and referring also to FIG. 10, rather than removing the bottom portion 412 and the cannula 414, the infusion device system may include a predetermined length of tubing 428 or other that connects to the bottom portion 412 on a first end of the tubing and to the infusion device mating assembly 404 on the second end of the tubing, thereby creating a fluid connection between the disposable housing assembly 402 and the cannula 414 without the need for removing a first cannula and inserting a second cannula.

[0057] In various embodiments of the bottom portion, the bottom portion may be made from clear plastic or another clear material allowing for the cannula site to be viewed. This may be desirable/beneficial for many reasons, including, but not limited to, the ability to determine whether the cannula has become dislodged or if there is blood or other indication of a potential occlusion within the cannula. In various embodiments, tubing may be used in conjunction with any embodiment of the infusion device described herein. Also, the tubing, in various embodiments, may be any size and length.

[0058] In various embodiments of the infusion device system, the disposable housing assembly 402 may include a viewing opening (see for example, FIG. 4, item 208) allowing the user or a caregiver to view the cannula 414. This may be desirable/beneficial for many reasons, including, but not limited to, the ability to view the status of the cannula 414 that is inserted in the user. This may be desirable/beneficial for many reasons, including, but not limited to, the ability to determine whether the cannula 414 has become dislodged or if there is blood or other indication of a potential occlusion within the cannula.

[0059] In various embodiments, the disposable housing assembly may include a fluid connector assembly, for example, one or more of the embodiments described U.S. patent application Ser. No. 13/788,260, filed Mar. 7, 2013 and entitled Infusion Pump Assembly, now U.S. Publication No. US-2014-0107579, published Apr. 17, 2014 (Attorney Docket No. K40) which is hereby incorporated herein by reference in its entirety. Thus, in these embodiments, the infusion device mating assembly may be part of the fluid connector assembly. In various embodiments including a fluid connector assembly and a viewing opening, the viewing opening may be included on the fluid connector assembly.

[0060] In any of the embodiments of the infusion device described herein the infusion device may connect to a length of tubing which is connected to a fluid source. However, in any of the embodiments of the infusion device described herein, the tubing may be optional and therefore, the infusion device is a tubless infusion device until and unless a user attaches a predetermined length of tubing to the infusion device.

[0061] In various embodiments, these methods may be used with respect to any device and/or medical device and/or any controller and/or remote controller for any device and/or medical device and/or any device used in conjunction with or in association with any device and/or medical device.

[0062] A number of embodiments have been described. Nevertheless, it will be understood that various modifications may be made. Accordingly, other embodiments are within the scope of the following claims.

[0063] While the principles of the invention have been described herein, it is to be understood by those skilled in the art that this description is made only by way of example and not as a limitation as to the scope of the invention. Other embodiments are contemplated within the scope of the present invention in addition to the exemplary embodiments shown and described herein. Modifications and substitutions by one of ordinary skill in the art are considered to be within the scope of the present invention.

What is claimed is:

1. An infusion device system comprising:
 - a disposable housing assembly comprising:
 - an infusion device mating assembly attached to the disposable housing assembly comprising a piercing needle; and
 - a reservoir,
 - wherein the piercing needle fluidly connected to the reservoir; and
 - an infusion device comprising:
 - a top portion comprising an introduction needle; and
 - a bottom portion comprising a septum and a cannula, the top portion removably attached to the bottom portion,